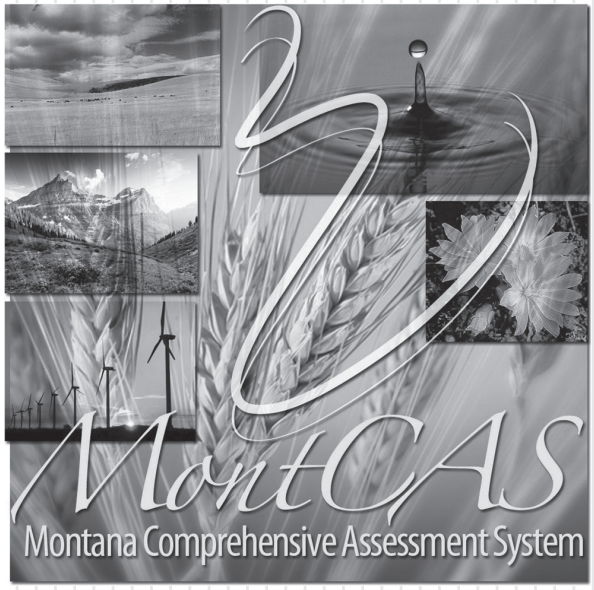
Montana Comprehensive Assessment System (MontCAS CRT)

Grade 7
Common Released Items
Spring 2011



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Montana
Office of Public Instruction
Denise Juneau, State Superintendent

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Reading Directions

This Reading test contains three test sessions. Mark or write your answers in the Answer Booklet. Use a pencil to mark or write your answers.

This test includes two types of questions: multiple-choice and constructed-response questions.

For the multiple-choice questions, you will be given four answer choices—A, B, C, and D. You are to choose the correct answer from the four choices. Each question has only one answer. After you have chosen the correct answer to a question, find the question number in your Answer Booklet and completely fill in the circle for the answer you chose. Be sure the question number in the Answer Booklet matches the question number in the Test Booklet. The example below shows how to completely fill in the circle.

CORRECT MARK	INCORRECT MARKS
●	❍ ⊙ ◉ ⊘

If you decide to change your answer to a question, erase the wrong mark completely before filling in the circle of the new answer. Be sure you have only one answer marked for each question. **If two circles are bubbled in for the same question, that question will be scored as incorrect.**

If you are having difficulty answering a question, skip the question and come back to it later. Make sure you skip the circle for the question in your Answer Booklet.

For the other types of questions in the Test Booklet, you will be asked to write your answers in the box provided. Read the question carefully. If a question asks you to explain your answer or to show your work, be sure to do so.

You may make notes or use highlighters in your Test Booklet, but you must bubble or write your final answers in your Answer Booklet. **Do not make any stray or unnecessary marks in your Answer Booklet.**

Let's work through a sample question together to be sure you understand the directions.

Sample Question

1. What is the capital of Montana?
   A. Browning
   B. Glendive
   C. Helena
   D. Missoula

Reading

Read the passage about a boy who enjoys looking up at the night sky, and then answer the questions that follow.

The Intruder

Will Hobbs

It was late in the evening at the end of the first week of August. I was home alone and sitting on the edge of my bed, only seconds from crashing. I let out a huge yawn.

In a way, I owe my life to my watch. As I reached to take it off, I had the vague feeling that I was supposed to do something at a certain time.

Do what, Brady?

Then I remembered. I'd been checking out the Perseid meteor shower off and on since the middle of July, and this was the night it was going to peak. I threw open my window, swiveled outside onto the flat roof of our garage, and pulled up the lawn chair I keep out there.

5 The sky was inky black and blazing with stars, which is nothing unusual for the Black Hills of South Dakota. Most nights are cloud-free, and our dry mountain air makes for excellent stargazing. Living out of town helps, too—no lights.

I'd barely found where to look—in front of the Perseus constellation—when the first shooting star fell, then another, and another.

What a show. I could read my watch by starlight alone, and I started timing them. Five to seven a minute!

Mars was hovering just above the treetops, brighter than any star and twinkling bloody red. Mars hadn't passed this close to Earth in a couple hundred years.

Too bad Quinn is missing the show, I thought. My cousin lived forty miles north in the town of Lead, which rhymes with *speed*. On Quinn's block the streetlights make for lousy stargazing.

I'd been outside awhile, long enough to feel the chill, and was about to crawl back inside and hit the sack. My dad might be getting home soon, but he wasn't expecting me to wait up.

All was quiet except the burbling of Spring Creek and a slight breeze in the pines. Nothing unusual was happening. Then, in a split second, something *totally* unusual was happening: the sky was changing from black to blue.

12 Horizon to horizon, the night sky was glowing a brilliant blue. My jaw was on the ground. Strange, beautiful, bizarre, eerie, weird, awesome . . . words can't begin to describe that light.

Then, suddenly, *BOOM! BOOM!* Two tremendous explosions rocked the sky, so powerful they rattled my bedroom window. What in the world?

I didn't know what to make of the blue light, but I wondered if the booms had come from the Crazy Horse Memorial five miles south, where they're carving a mountain into the biggest statue in the world. Lately my dad and his crew had been widening the gap between Crazy Horse's pointing arm and the mane of his warhorse. Saturday evenings in the summer, like this one, they do a night blast for the tourists. It's totally spectacular. From home we sometimes hear a muffled rumble, but nothing like this.

I didn't have time for another thought. All at once, a roar and a blinding fireball were coming down on me like a freight train strapped to a runaway skyrocket. I hit the deck, and as I did, *WHAM!* Something crashed right into the house. From the earsplitting sound of it, I'd nearly got hit.

16 Blinking and <u>stupefied</u>, I got to my feet, amazed to discover I was among the living. The sky was black again and lit with stars. Except for the burbling creek, everything was dead quiet.

Meteorite? I wondered. Could that be possible?

I climbed back through the window into my bedroom. When I switched on the light, more strangeness awaited. My bed was littered with debris—bits of wood, chunks of plasterboard, shreds of asphalt shingle. My eyes went to the ceiling over my bed and found a ragged hole there, big as a softball.

I glanced back to my bed. The sheet was ripped open and scorched, right where I would have been lying. I stuck my fist into the hole and pushed it all the way through my foam mattress. Whatever had done this had punched a hole between two of the

slats spanning my bed frame. I couldn't reach any farther, so I dropped to my knees and looked under the bed. And there it was, among splinters on the floor, unbelievably real. A meteorite!

Heart hammering, I sat on the edge of my bed with my prize in one palm and then the other. The space rock looked like a baked potato, all burned shiny, but with rougher edges, pits, and sparkles. It was heavy, and almost too hot to handle, as well it might be after blazing a fiery hole through the atmosphere. We'd been hit by an intruder from outer space! I couldn't think of anything cooler that had happened in my entire life.

1. Which story element is established in the first paragraph?

   A. the main conflict
   B. the plot
   C. the setting
   D. the turning point

2. Which detail suggests that the narrator regularly climbs onto the roof of the garage to stargaze?

   A. the lawn chair
   B. the meteor shower
   C. the stars
   D. the watch

3. The details in paragraph 5 are **most likely** included to help the reader understand

   A. why the narrator thinks this night will be different.
   B. what creates the right conditions for stargazing.
   C. how the narrator knows there will be a meteor shower.
   D. when the shooting stars will begin to appear in the sky.

4. The last sentence in paragraph 12 **mainly** helps the reader to

   A. picture what the narrator looks like in this scene.
   B. understand how the narrator feels about what he sees.
   C. predict what is likely to happen next in the passage.
   D. realize why the appearance of the sky is changing.

5. The narrator compares the fireball to "a freight train strapped to a runaway skyrocket" to

   A. illustrate its force.
   B. show where it came from.
   C. reveal that it was a meteor.
   D. describe its size.

6. In paragraph 16, which word would **best** replace the word <u>stupefied</u>?

   A. stalled
   B. steady
   C. stuck
   D. stunned

7. What does the narrator realize after the meteorite crashes through his ceiling?

   A. how fortunate he was to escape injury
   B. why he went outside to watch the sky
   C. what he will tell his cousin when he sees him
   D. how confused he is about what has happened

8. Which event represents a turning point in the passage?

   A. The narrator sees the first shooting star.
   B. The sky changes from black to blue.
   C. An object crashes through the house.
   D. The narrator looks under his bed.

9. The description of the meteor as "an intruder from outer space" emphasizes

   A. how unusual the experience is for the narrator.
   B. how the narrator avoids being hit by the meteor.
   C. what will likely happen to the narrator next.
   D. why the narrator wants to hold the meteor in his hand.

10. Based on the passage, which conclusion can be reached about the narrator?

    A. He is willing to work hard to achieve his long-term goals.
    B. He understands how important it is to have a close family.
    C. He has an appreciation for the mysteries of the universe.
    D. He believes that a good education is a gift to be treasured.

11. The **main** purpose of the passage is to

    A. describe an unusual event as it is experienced by a young boy.

    B. explain how the Perseid meteor shower changes the appearance of the sky.

    C. highlight the setting of South Dakota and its importance to the story.

    D. explain how a conflict between a young boy and his environment is resolved.

12. Which book would be the **best** resource for more information about the Perseid meteor shower?

    A. *The Black Hills: Hiking, Camping—and More!*

    B. *Look Around: A Beginner's Guide to the Universe*

    C. *Crazy Horse Memorial: How It All Started*

    D. *Write On: How to Make Your Stories Exciting!*

13. Explain how the author creates a feeling of suspense in the passage. Use information from the passage to support your answer.

Scoring Guide

Score	Description
4	Response provides a thorough explanation of how the author creates suspense in the passage. Explanation includes specific, relevant information from the passage.
3	Response provides an explanation of how the author creates suspense in the passage. Explanation includes supporting information from the passage, but lacks specificity, relevance, and/or development.
2	Response provides a partial explanation of how the author creates suspense in the passage. Explanation includes limited information from the passage and/or is partially correct.
1	Response makes a vague or minimal statement of how the author creates suspense in the passage.
0	Response is totally incorrect or irrelevant.
Blank	No response.

Scoring Notes

A thorough response will include an explanation of how the author creates suspense in the passage. Information to support this explanation may include, but is not limited to, the following:

- The author uses foreshadowing to hint that something is going to happen: The narrator says, “In a way, I owe my life to my watch.”
- The author sets the scene with details about how the sky looks and conveys the excitement he feels about the meteor shower.
- The author uses the narrator’s thoughts to show how suddenly the sky changes and how amazing the sight is.
- Placing “BOOM! BOOM!” in all capital letters heightens the sense of how loud and unexpected the explosions are; “WHAM!” in all capital letters shows the force of the crash.
- The author only reveals what the narrator sees and hears, so the reader gradually learns what caused the explosion, adding to the suspense.

Example of Score Point 4

The author creates many feelings of suspense in this passage. One of these being just the title, "The Intruder". That made me wonder if someone was going to break into the house. I didnt know what was going to happen. Another reason being, in the second paragraph it said "I owe my life to my watch." I kept thinking something horrible would happen to him, like his life would be in jeperdy. Last, when in the 15th paragraph, it says "Wham! Something crashed right into the house." This completly changed my perspective on things. I can't even think what I would do if a meteorite crashed through my bed. I was wondering what had just gone through into this boys house. Those are a few feelings of suspense I felt during this passage.

Example of Score Point 3

The auther creates a feeling of suspense in the passage. He does this by foreshadowing events. One example of this is when he said; "the sky was changing from black to blue." He also creates the feeling of suspense by only letting us know what he knew when it was happening. For example, all he told us at the beggining of the passage was that he was just going to watch the stars, but when he started figuring stuff out he told us; like when he said, "something totally unusual was happening." That is how the author created a feeling of suspense in this passage.

Example of Score Point 2

He makes everything sound exciting. First off, he uses a lot of adjectives to describe what is happening. Second of all, he has a big shift in the story when the sky goes blue. Next, he makes the events sound exciting and make them more suspenseful to make the reader want to keep reading. The author makes this story exciting.

Example of Score Point 1

The author creates a feeling of suspense by using descriptive words. Also by making you want to read and keep reading to find out what happens next.

Example of Score Point 0

the author wrote this story to entertain the reader

Read this article about a kind of candy, and then answer the questions that follow.

Gummi Bears and Gummi Candy

History of Gummi Bears and Gummi Candy

The gummi bear is a German creation. Hans Riegel, a candy maker from Bonn, Germany, invented the gummi bear in 1922. Initially, he called his invention the "dancing bear" and named the company that manufactured the bears "Haribo," an acronym for Hans Riegel Bonn. The confection became popular by the end of its first year.

2 For many years, gummi bears were imported to America. American high school students were among the first Americans to know about the gummi bear. They learned about the candy through their German classes. In 1981, the Herman Goelitz Company (now Jelly Belly Candy Company) created the first American-made gummi bear. A year later, the Haribo Company brought their business to the U.S., and the candy was now easily accessible to Americans.

The 1980s also gave birth to a new gummi character. In 1981, Trolli came out with the gummi worm. The original concept of the gummi worm was to create a candy for children that their parents might find mildly shocking. Since then, the gummi worm has become less shocking and one of the most popular gummi characters. Many characters followed the gummi worm and gummi candies now are available in all shapes and sizes.

In 1985, Disney created a cartoon show, "The Adventures of the Gummi Bears," based on the popular German confection. It was an adventure cartoon for children that lasted 65 episodes. The show followed a family of gummi bears on many wacky journeys.

Today, gummi bears and other gummi candies are great confections enjoyed year round.

How Are Gummi Bears and Gummi Candy Made?

Did you ever wonder how confectioners make those tiny characters? The gummi manufacturing process is a long procedure that begins with artists for the manufacturer's company.

Artists start with a character sketch and then carve it into tiny plaster molds. Then, machines duplicate the molds. The duplicates are run through a starch powder machine to produce starch powder mold pans.

In the factory, candy makers pour ingredients into large boilers. Some of the ingredients include gelatin, sugar, and glucose syrup. The ingredients are heated together and constantly stirred by large paddles. Colors and flavorings are added to give the gummi snacks their distinct look and taste. Next, pipes transfer the mixture to the production area.

Nozzles are used to squeeze the mix onto the starch boards where it is left for three to five days. Afterwards, beeswax is added to make the candy shiny and less sticky. The gummi candies are finally moved to a packaging machine and are ready to ship.

- Gummi bears are one of the only, if not the only, type of candy to be turned into a television show.
- Gummi bears were originally called "dancing bears."
- Today, gummi candy is available in a variety of shapes—spiders, watches, hamburgers, pizza, bugs, feet, and more. However, bears and worms are the most popular.
- Red is the most popular color of gummi candy.

14. Based on the first paragraph, an <u>acronym</u> is a
    A. scientific term.
    B. familiar word.
    C. common ingredient.
    D. word made of initials.

15. In paragraph 2, parentheses are used around the phrase "(now Jelly Belly Candy Company)" to show that the phrase contains
    A. the author's opinion.
    B. additional information.
    C. a humorous comment.
    D. the inventor's name.

16. According to the article, which person is important to the process of making gummi candy?
    A. an artist
    B. an inventor
    C. a student
    D. a writer

17. When is coloring and flavoring added to the gummi candy?
    A. before the ingredients are poured into boilers
    B. while the sugar and glucose sugar are added
    C. after the ingredients are heated and stirred
    D. when the beeswax is poured into the candy mixture

18. What is the **main** purpose of the information in the bulleted list?

A. to inform the reader about the history of gummi candy

B. to show the reader why gummi candy first became popular

C. to tell the reader how different gummi candy is made

D. to provide the reader with some fun facts about gummi candy

19. The author **most likely** wrote this article to

A. inform the reader about the history of gummi candy.

B. instruct the reader about the process used to make gummi candy.

C. provide information about the inventor of gummi candy.

D. show the connection between cartoon shows and gummi candy.

20. Which would be the **best** source for more information about gummi bears?

A. a photograph exhibit about Bonn, Germany, in the 1920s

B. a Web site about popular cartoon shows in the 1980s

C. a magazine article about the Jelly Belly Candy Company

D. an Internet dictionary entry for the word "confection"

Read this article about conducting an experiment on the water you drink, and then answer the questions that follow.

Water You Drinking?

Elizabeth Snoke Harris

?

How does location affect water hardness?

Can you drink hard water? Hard water is water that has lots of minerals in it.

What You Need

- Water from many different places
- Measuring cup
- Clear 20-ounce soda bottles (one for each place you will collect water from)
- Permanent marker
- Dishwashing soap*
- Helper
- Stopwatch
- Ruler

** Don't use "Ultra" dishwashing soap. It will make too many bubbles.*

Experiment

1. Find at least four places to measure the water hardness. These places should all be very different. For example: your house, your best friend's house, your school, and the water fountain at the playground. The farther away these places are, the better.

2. Collect the water from each place. Use the measuring cup to pour exactly 1 cup (236.6 mL) of water into each soda bottle. Using the permanent marker, label each of the bottles with the place name.

3. Place two drops of dishwashing soap into the first bottle. Screw the top on very tightly. Shake the bottle as hard as you can for one minute. Have your helper time you with the stopwatch.

4. As soon as you're done shaking it, use the ruler to measure the total height of the bubbles in the bottle. In your lab notebook,* write down where the water came from and the height of the bubbles. If the water is very soft, the whole bottle may be filled with bubbles. If the water is very hard, you may not have any bubbles at all. Most places will be somewhere in between.

5. Repeat steps 3 and 4 with each bottle.

Conclusion

Make a bar graph to show your results. Put where the water came from on the **X** axis and total bubble height on the **Y** axis. Hard water will make less bubbles and soft water will make lots of bubbles. Which place had the hardest water? Which place had the softest water? Why do you think that is?

EXPLORE FURTHER

What changes if you boil the water for different times, or add lime and other water softeners from the hardware store to it before adding the dishwashing soap? Try using different types of soaps like shampoos or liquid hand soap to make the bubbles.

TAKE A CLOSER LOOK

About 85% of houses have hard water! Does yours? What other places had hard water? Hard water doesn't actually feel hard. It's called hard water because it has *minerals*, such as calcium and magnesium, in it. These minerals can make your water taste funny. Sometimes hard water eats away the metal in your pots and pans, and it can make it difficult to get a good soapy lather with your shampoo. But hard water isn't bad for you. Our bodies need certain minerals to stay healthy. Drinking hard water is one way to help your body get the calcium and magnesium it needs. A recent study suggests that drinking hard water lowers your risk of heart disease.

How do minerals end up in water? When water flows over rocks in the ground (like when it's in a river or under the ground), the minerals in the rocks *dissolve* and the water carries them around. Water without lots of minerals is called soft water. Some places use chemicals to remove the minerals. If you live near an ocean, you probably have very soft water. When the salt is removed from ocean water, the minerals are also removed.

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* A lab notebook is a notebook used for recording observations and results of an experiment.

21. Why is there a question in a circle at the beginning of the article?

A. It is the title of the article.
B. It suggests the purpose of the article.
C. It divides the title from the rest of the text.
D. It describes a mystery that scientists cannot solve.

22. Why is it important that the four places from which to take water be far from one another?

A. to increase the chance that the samples have different water sources
B. to avoid the problems caused by certain chemicals in water
C. to make the results of the experiment of wider interest to others
D. to ensure that at least one sample has minerals in it

23. The **main** reason the drawing is included is to show

A. how tall the soda bottles should be.
B. how much water to put in each bottle.
C. how to measure the height of the bubbles.
D. how to determine the depth of the minerals.

24. What would **most likely** happen if time was not kept when shaking the bottle?

A. The bubbles might not last long enough.
B. The results might not be accurate.
C. The bubbles might ruin the experiment.
D. The measurement time might be too short.

25. What should be done **last** in the experiment?

A. making a bar graph
B. shaking the last soda bottle
C. labeling each of the soda bottles
D. measuring the height of the bubbles

26. What is the purpose of the section **TAKE A CLOSER LOOK**?

A. to explain what hard water is and where it comes from
B. to describe additional hard-water experiments you can do
C. to show how to draw conclusions from your hard-water experiment
D. to tell where to get additional information about minerals and hard water

27. Which book would **most** likely have additional experiments like the one in the article?

A. *Rivers, Lakes, Oceans*
B. *The Human Body Book*
C. *Saving Our Resources*
D. *Your Home Is a Laboratory*

Mathematics Directions

This Mathematics test contains three test sessions. Mark or write your answers in the Answer Booklet. Use a pencil to mark or write your answers.

This test includes three types of questions: multiple-choice, short-answer, and constructed-response questions.

For the multiple-choice questions, you will be given four answer choices—A, B, C, and D. You are to choose the correct answer from the four choices. Each question has only one answer. After you have chosen the correct answer to a question, find the question number in your Answer Booklet and completely fill in the circle for the answer you chose. Be sure the question number in the Answer Booklet matches the question number in the Test Booklet. The example below shows how to completely fill in the circle.

CORRECT MARK	INCORRECT MARKS
●	❍ ⊙ ◉ ⊘

If you decide to change your answer to a question, erase the wrong mark completely before filling in the circle of the new answer. Be sure you have only one answer marked for each question. **If two circles are bubbled in for the same question, that question will be scored as incorrect.**

If you are having difficulty answering a question, skip the question and come back to it later. Make sure you skip the circle for the question in your Answer Booklet.

For the other types of questions in the Test Booklet, you will be asked to write your answers in the box provided. Read the question carefully. If a question asks you to explain your answer or to show your work, be sure to do so.

You may make notes or use highlighters in your Test Booklet, but you must bubble or write your final answers in your Answer Booklet. **Do not make any stray or unnecessary marks in your Answer Booklet.**

Let's work through a sample question together to be sure you understand the directions.

Sample Question

1. Montana is the **fourth** largest state. How many states are larger than Montana?

   A. 1
   B. 3
   C. 10
   D. 42

Mathematics (No Calculator)

1. Mrs. Richards bought $2\frac{5}{8}$ yards of red fabric and $3\frac{3}{4}$ yards of blue fabric. What is the total number of yards of fabric Mrs. Richards bought?

   A. $5\frac{3}{8}$

   B. $5\frac{2}{3}$

   C. $6\frac{3}{11}$

   D. $6\frac{3}{8}$

2. At Lakeside School, 45% of the students signed up to go on a field trip to visit a mine. There are 120 students in the school. How many students signed up to go on the field trip?

   A. 45

   B. 54

   C. 60

   D. 75

3. Study the equation below.

   $$5 + 3x = 15$$

   Which equation has the same solution?

   A. $3x = 3$

   B. $3x = 10$

   C. $3x = 15$

   D. $3x = 20$

4. Which expression is equivalent to $(1 + 4)^3$?

   A. $3 \times (1 + 4)$

   B. $(3 \times 1) + (3 \times 4)$

   C. $(1 \times 1 \times 1) + (4 \times 4 \times 4)$

   D. $(1 + 4) \times (1 + 4) \times (1 + 4)$

5. Which list of numbers is in order from **least** to **greatest**?

A. $2.\overline{45},\ 2\frac{2}{5},\ 2.49$

B. $2.\overline{45},\ 2.49,\ 2\frac{2}{5}$

C. $2\frac{2}{5},\ 2.\overline{45},\ 2.49$

D. $2\frac{2}{5},\ 2.49,\ 2.\overline{45}$

6. A recipe calls for $3\frac{1}{4}$ cups of flour. How much flour should Jason use if he wants to make half the recipe?

A. $1\frac{1}{2}$ cups

B. $1\frac{5}{8}$ cups

C. $1\frac{3}{4}$ cups

D. $2\frac{1}{6}$ cups

7. Karen enlarged a photo to 150% of its original size. How many times as large as the original photo is the enlarged photo?

A. $1\frac{1}{5}$

B. $1\frac{1}{2}$

C. 15

D. 150

8. A town's noontime temperatures on the four coldest days last February are shown in the chart below.

February's Coldest Noontime Temperatures

Day	Temperature
February 5	–16°F
February 9	–11°F
February 22	–19°F
February 23	–17°F

Which of these noontime temperatures was the **warmest**?

A. –16°F

B. –11°F

C. –19°F

D. –17°F

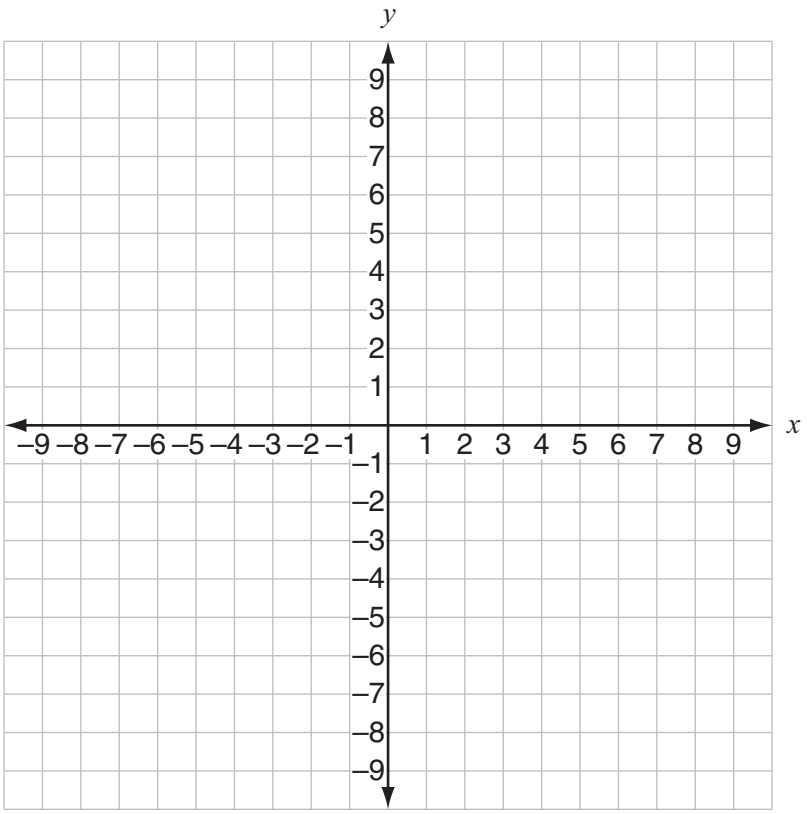
9. Compute:

$4 - .068$

10. Solve for n:

$7n - 3 = 53$

11. Copy the coordinate grid below onto the grid in your Answer Booklet.



a. Draw points *J*, *K*, and *L* on the coordinate grid and label them.
   - Point *J* at (3, 1)
   - Point *K* at (1, 3)
   - Point *L* at (7, 3)

b. Locate point *M* so that *JKLM* is a parallelogram. What are the coordinates of point *M*?

c. Locate a different point, *P*, so that *KJLP* is a parallelogram. What are the coordinates of point *P*?

d. Locate a different point, *T*, so that *JLKT* is a parallelogram. What are the coordinates of point *T*?

Scoring Guide

Score	Description
4	4 points
3	3 points
2	2 points
1	1 point
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Scoring Notes

Part a: 1 point all 3 points are correctly drawn and labeled

Part b: 1 point **(9, 1)**, or correct coordinates based on incorrect part a

Part c: 1 point **(5, 5)**, or correct coordinates based on incorrect part a

Part d: 1 point **(–3, 1)**, or correct coordinates based on incorrect part a

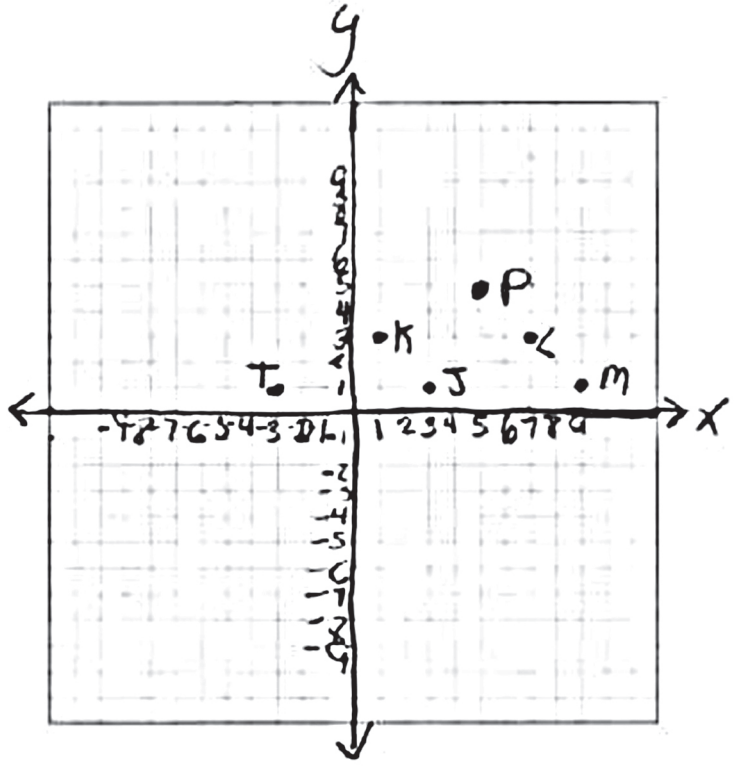
Note: If the student lists a pair of coordinates that complete the parallelogram, but not in the correct part, do not award a 4 score. Otherwise, do not penalize.

If student reverses the plotting of coordinates in part a [(y, x) instead of (x, y)], give full credit in parts b, c, and d if the error is continued.

Example of Score Point 4

Sample 1

M(9,1)
P(5,5)
T(-3,1)



Example of Score Point 4

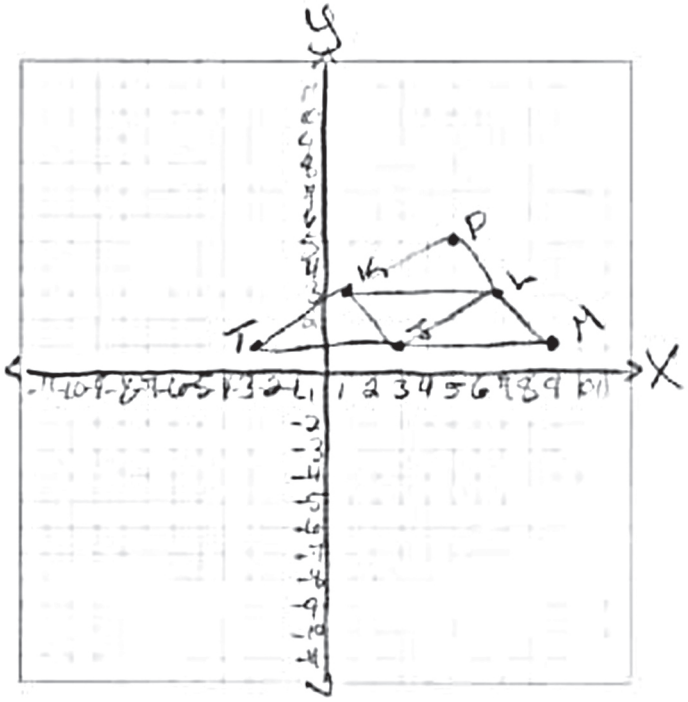
Sample 2

A) on graph

C) (5,5)

B) (9,1)

D) (-3,1)



Example of Score Point 3

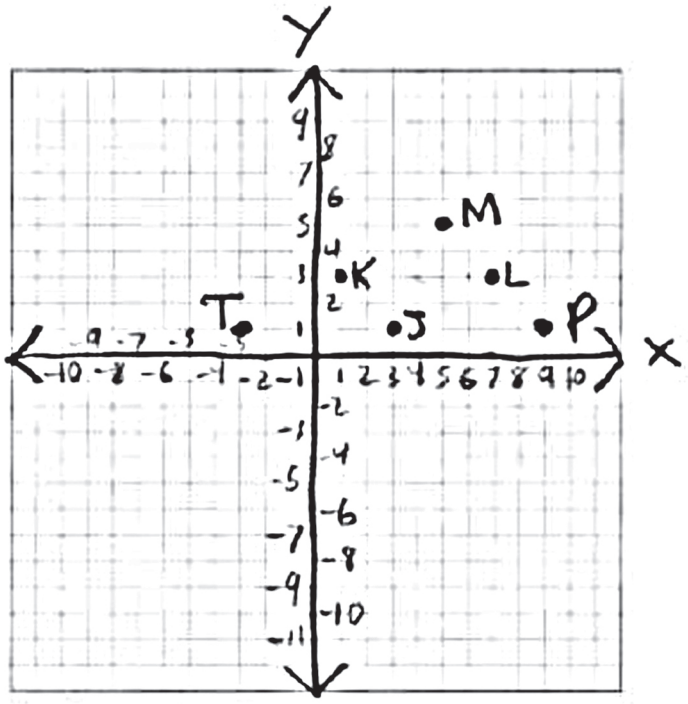
Sample 1

a.)

b.) M = (5, 5)

c.) P = (9, 1)

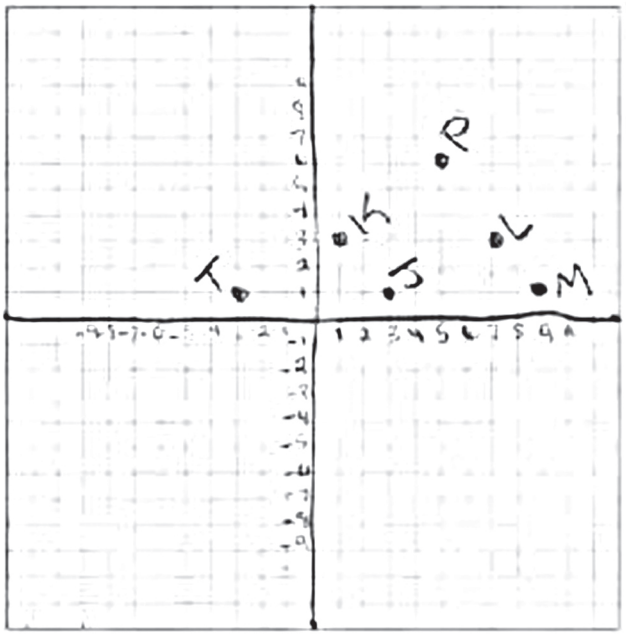
d.) T = (-3, 1)



Example of Score Point 3

Sample 2

(b) M(9, 1)
(c) P(5, 6)
(d) T (-3, 1)



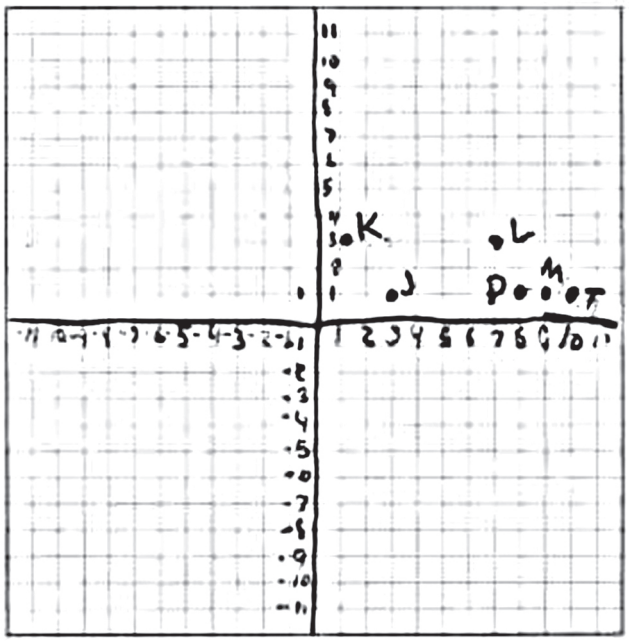
Example of Score Point 2

Sample 1

Point M at (9,1)

Point P at (9,1)

Point T at (10,1)



Example of Score Point 2

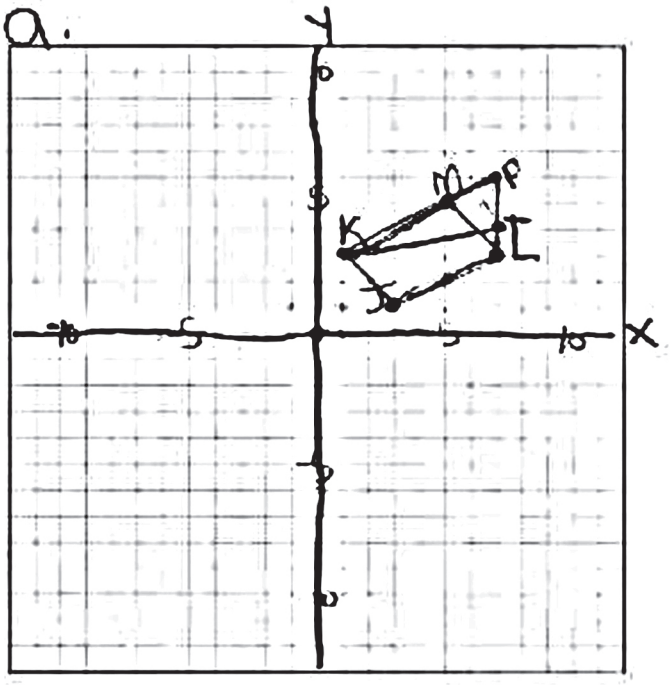
Sample 2

b. The coordinate points of M are (5,5)

c. The coordinate points of P are (7,6)

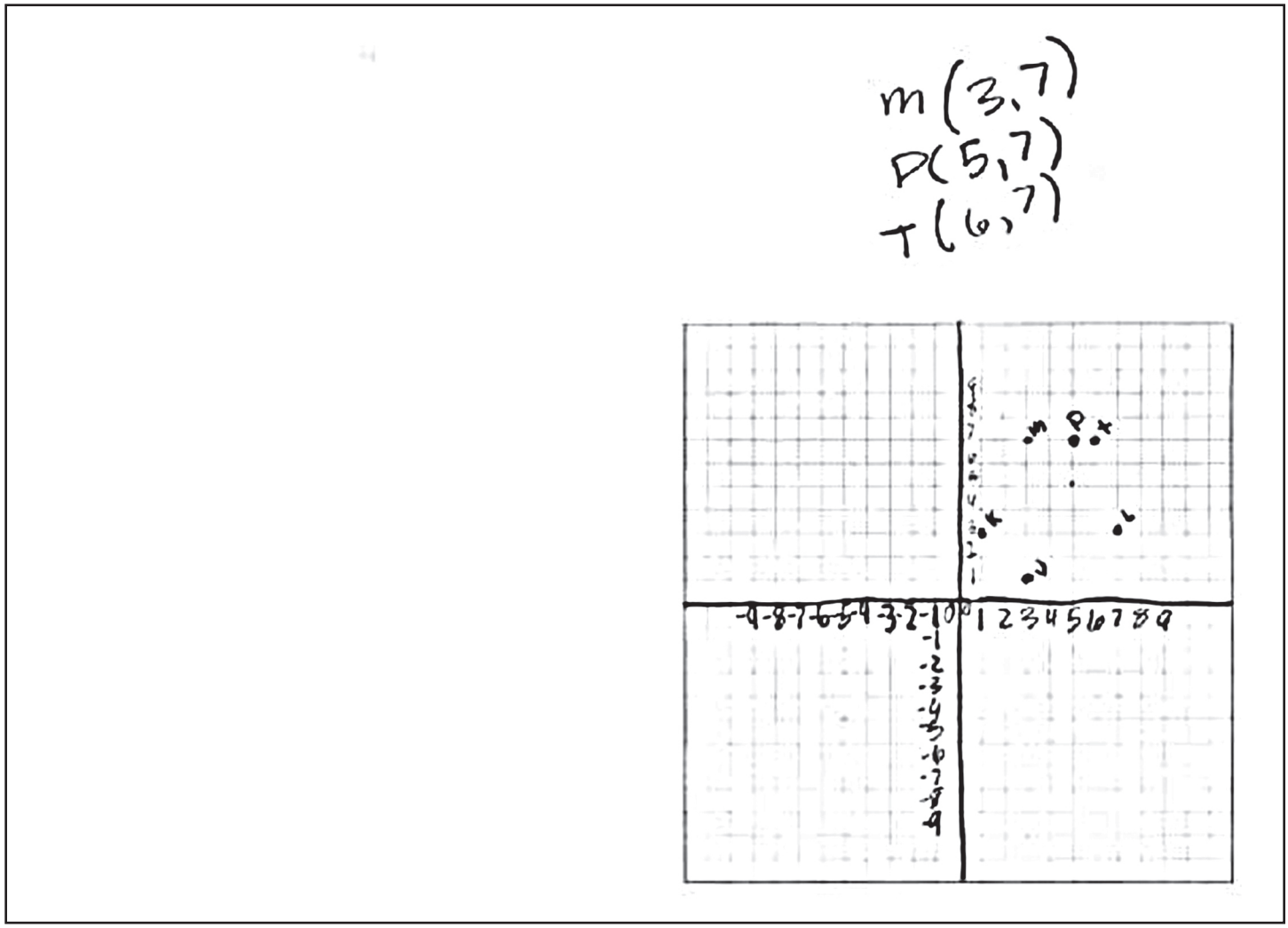
d. The coordinate points of T are (7,4)

a.



Example of Score Point 1

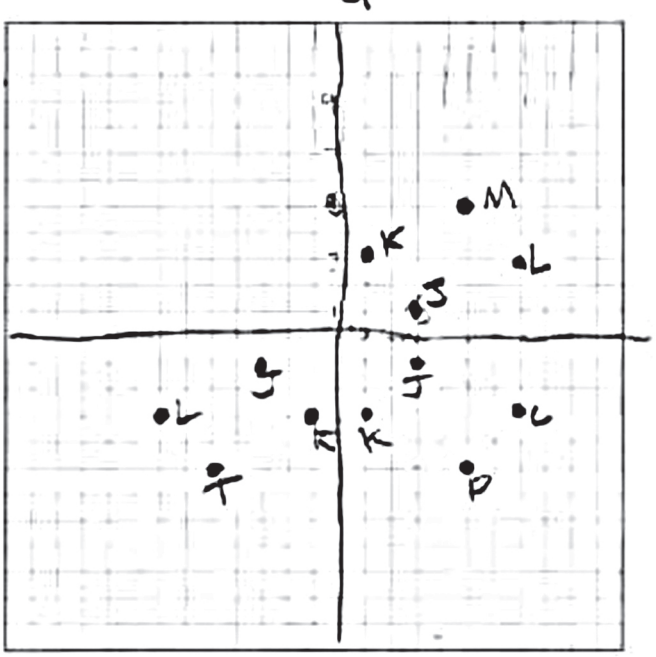
Sample 1



Example of Score Point 1

Sample 2

a

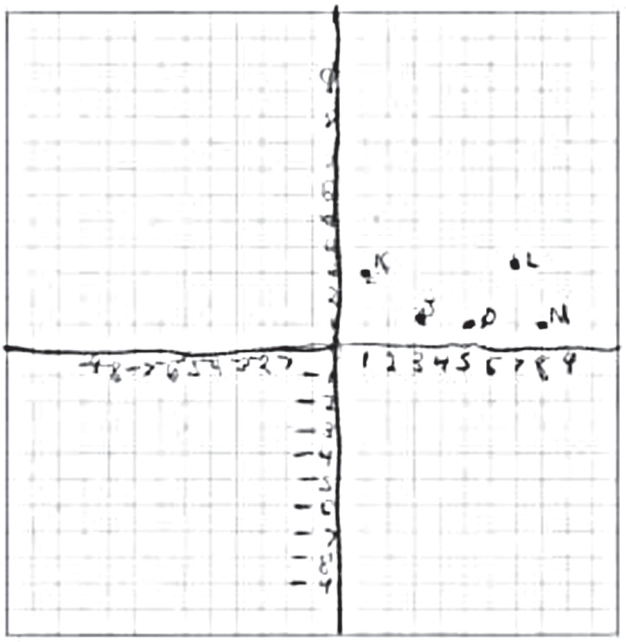


b. M=(5,5)

c.

Example of Score Point 0

Sample 1



M(8,1) P(6,1) T(2,1)

Example of Score Point 0

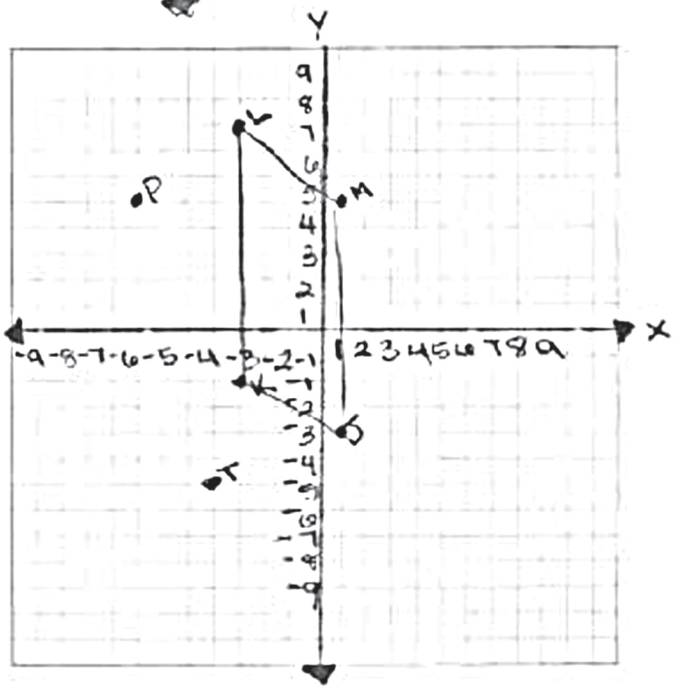
Sample 2

b) M-5,1

c) P-5,6

d) T-5,4

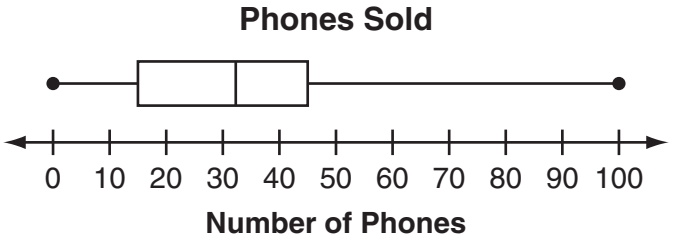
a)



12. Alex is taking a survey to find the most popular sport among students in grades 6 through 8. Which group would be **best** for Alex to survey?

A. all of the members of the Science Club
B. all of the students on the basketball team
C. a random sample of 6th-grade students
D. a random sample of students in grades 6 through 8

13. Karen works at a phone store. She recorded the number of phones she sold each month during a one-year period. The box-and-whisker plot below shows her data.



What is the median number of phones Karen sold per month during that year?

A. 15
B. 32
C. 45
D. 50

14. Study the pattern below.

1, 10, 5, 50, 45, 450, 445, . . .

What number comes next in the pattern?

A. 4460
B. 4455
C. 4450
D. 4445

15. The Baxter family signed up for a rafting trip. Ticket prices are shown in the chart below.

Rafting Ticket Prices

Ticket	Price (adult)	Price (child)
Half day	$44	$34
Full day	$76	$52

Mr. Baxter must buy tickets for 2 adults and 2 children for a **full day**. Which expression can be used to determine the total cost of the tickets?

A. $2(76 + 52)$
B. $(2 + 76) + (2 + 52)$
C. $2(34 + 44)$
D. $(2 + 34) + (2 + 44)$

16. Hank goes to the pool every 3 days, Sarah goes every 4 days, and Jay goes every 5 days. The pool is open 7 days a week. If Hank, Sarah, and Jay were all at the pool today, when is the next time they will all be at the pool on the same day?

A. in 12 days
B. in 19 days
C. in 30 days
D. in 60 days

17. Mr. Harris made a stem-and-leaf plot of the 20 test scores in his first-period class, as shown below.

Test Scores

6	2 3 8
7	6 9 9 9
8	0 1 1 2 3 4 8
9	1 2 5 5 6 6

Key

7 | 6 = 76%

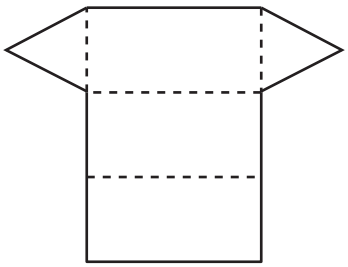
What percent of students had test scores of 85% or higher?

A. 7%
B. 35%
C. 65%
D. 70%

18. Greg ran 10 miles in 2 hours. After training, he increased his speed by 0.5 mile per hour. At this increased speed, how many miles can Greg now run in 2 hours?

A. 4.5
B. 10.5
C. 11
D. 15

19. Study the net below.



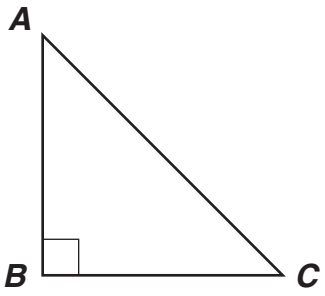
Which type of figure results from folding this net along the dotted lines?

A. rectangular prism
B. rectangular pyramid
C. triangular prism
D. triangular pyramid

20. An average adult human body contains about 10 pints of blood. About how many gallons is 10 pints?

A. 0.80
B. 1.25
C. 2.50
D. 5.00

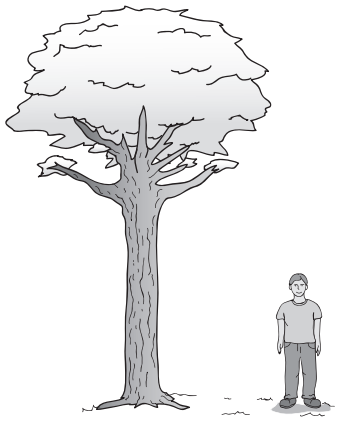
21. Right triangle *ABC* is shown below.



Which statement is true?

A. Angle *A* and angle *C* are complementary angles.
B. Angle *A* and angle *C* are supplementary angles.
C. Angle *A* and angle *B* are complementary angles.
D. Angle *A* and angle *B* are supplementary angles.

22. John took a photograph of his father standing next to a tree, as shown below.



John's father is about 6 feet tall. Which is the **best** estimate for the height of the tree?

A. 30 feet
B. 18 feet
C. 12 feet
D. 6 feet

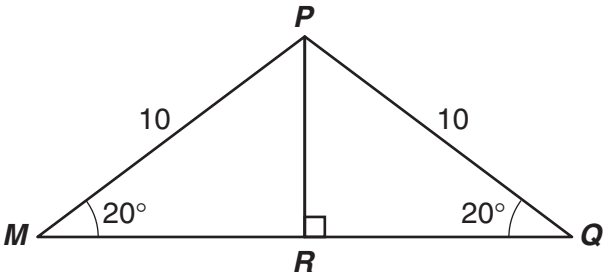
23. A contractor offers clients options for how a room is finished. Clients can choose from the following:

- Room color: blue, tan, or green
- Trim color: white or cream
- Floor surface: wood, tile, or carpet

How many different combinations of one room color, one trim color, and one floor surface are offered?

A. 6
B. 8
C. 18
D. 27

24. Study the triangle below.



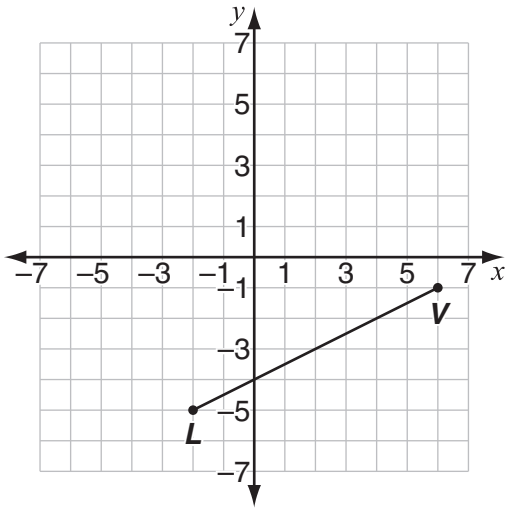
What is the measure of $\angle MPQ$?

A. 20°
B. 70°
C. 110°
D. 140°

25. Mia chose a book that has 636 pages. She has already read 96 pages. Mia reads approximately 24 pages per day. Which equation can be used to calculate the number of days, n, it will take Mia to finish reading the book?

A. $636 = 24n - 96$
B. $636 = 24n - 96n$
C. $636 = 24 + 96n$
D. $636 = 96 + 24n$

26. Segment $\overline{LV}$ is shown on the coordinate plane below.



Which point is on $\overline{LV}$?

A. (–3, 2)
B. (–2, 3)
C. (2, –3)
D. (3, –2)

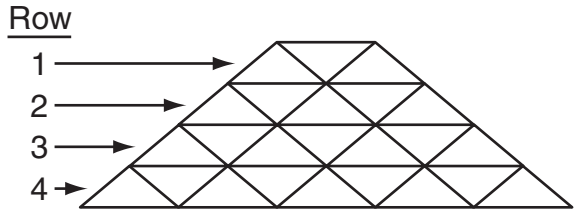
27. Every day, Kevin walks 10 laps around a circular ice rink. The rink has a diameter of 30 feet. What is the approximate length, in feet, of Kevin's walk? (Use 3.14 for π.)

A. 1884
B. 942
C. 471
D. 300

28. Bill has a deck of 52 cards. The deck contains 36 number cards, 12 face cards, and 4 aces. Bill picks up one of the cards without looking. What is the probability that he picks a number card?

A. $\frac{4}{13}$
B. $\frac{1}{3}$
C. $\frac{4}{9}$
D. $\frac{9}{13}$

29. Study the pattern below.



If the pattern continues, how many small triangles will be in Row 7?

A. 23
B. 21
C. 17
D. 15

30. The list below shows the number of visits to a Web site each day during one week.

Web Site Visits

934	949	663	328	734	840	512

What is the range of the number of visits to this Web site each day during this week?

A. 328
B. 422
C. 621
D. 734

Acknowledgments

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